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Math Modeling for high school students: Moody's Mega Math Challenge as educational outreach.

Moody's Mega Math Challenge is an Internet-based, applied math competition for high school juniors and seniors. Now in its sixth year, the competition is free to register and participate, and is open to high schools in 18 states along the East Coast. Winners receive scholarships totaling \$100,000 toward the pursuit of higher education. Working in teams of three to five, participants are required to solve an open-ended, applied math-modeling problem focused on a realistic issue in 14 hours. For instance, this past year's problem focused on ways to improve the Census count, and last year's question asked if the Stimulus Act would improve the U.S. economy. This sort of real-world focus introduces applied math to students as a powerful problem-solving tool, and potentially, as a viable and exciting profession.

Judging of submissions is done in a three stage process by professional and PhD level applied mathematicians. For the first time in 2011, teams will receive individualized comments from first round judges about their paper's strengths and weaknesses - to further enhance the educational benefit. (Received September 21, 2010)